IN THE CLAIMS

Please amend the claims as follows:

Claims 1-18 (Canceled).

Claim 19 (Original): An X-ray computer tomography apparatus, comprising:

an X-ray source configured to irradiate X-rays onto an object to be examined from plural directions;

an X-ray detection unit configured to detect X-rays transmitted through the object;

a driving unit configured to rotate at least one of the X-ray source and the X-ray detection unit around the object;

a moving unit configured to move the object in a given direction;

an image data generation unit configured to generate image data on the basis of projection data from the object collected from the X-ray detection unit plural times while moving the object by the moving unit;

an ROI setting unit configured to set a region of interest in the image data generated by the image data generation unit;

a CT value calculating unit configured to calculate CT values, in pixels, in the region of interest of the image data, while generating the image data by the image data generation unit;

a range setting unit configured to set a range of the CT values;

a pixel number measuring unit configured to measure the number of pixels providing CT values which are calculated by the CT value calculating unit and which are contained within the range set by the range setting unit;

a threshold setting unit configured to set a threshold value for the number of pixels; and

a pixel number comparing unit configured to keep comparing the number of pixels

obtained by the pixel number measuring unit with the threshold value of the number of pixels

set by the threshold setting unit and to generate an instruction signal for stopping X-ray

irradiation when both substantially agree.

Claim 20 (Original): The X-ray computer tomography apparatus according to claim

19, further including a pixel number display unit, and

wherein the pixel number display unit displays changes of the number of pixels with

time measured by the pixel number measuring unit.

Claims 21-22 (Canceled).

Claim 23 (New): An X-ray computer tomography apparatus comprising:

an X-ray source configured to irradiate X-rays into an object to be examined;

an X-ray detection unit configured to detect X-rays transmitted through the object;

a driving unit configured to rotate at least one of the X-ray source and the X-ray

detection unit around the object;

an image data generation unit configured to generate image data on the basis of

projection data using the X-ray detection unit;

an ROI setting unit configured to set up a region of interest in first image data from

the image data generation unit, prior to injecting a contrast medium into the object;

a CT value calculating unit configured to calculate CT values in the region of interest

being set in second image data from the image data generation unit, on the basis of positional

information of the region of interest, the second image data being generated plural times,

after injecting the contrast medium into the object;

a CT value display unit configured to display changes of CT values with time

calculated by the CT value calculating unit;

an irradiation condition setting unit configured to set a X-ray irradiation condition

under which the X-ray source irradiates X-rays onto the object, wherein the irradiation

condition setting unit modifies the X-ray irradiation condition during generation of the

second image data, and to set a first irradiation condition under which low-dose X-rays are

irradiated and a second irradiation condition under which high-dose X-rays are irradiated on

the basis of CT values; and

wherein the irradiation condition setting unit is further configured to set irradiation

conditions for first scanning under the first irradiation condition, second scanning under the

second irradiation condition, and third scanning under the first irradiation condition during

generation of the second image data.

Claim 24 (New): An X-ray computer tomography apparatus comprising:

an X-ray source configured to irradiate X-rays into an object to be examined;

an X-ray detection unit configured to detect X-rays transmitted through the object;

a driving unit configured to rotate at least one of the X-ray Source and the X-ray

detection unit around the object;

an image data generation unit configured to generate image data on the basis of

projection data using the X-ray detection unit;

an ROI setting unit configured to set up a region of interest in first image data from

the image data generation unit, prior to injecting a contrast medium into the object;

a CT value calculating unit configured to calculate CT values in the region of interest

being set in second image data from the image data generation unit, on the basis of positional

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information of the region of interest, the second image data being generated plural times,

after injecting the contrast medium into the object;

a threshold setting unit configured to set at least one threshold value for the CT

values;

a CT value comparing unit configured to keep comparing the CT values calculated by

the CT value calculating unit with the threshold value set by the threshold setting unit and to

generate a coincidence signal when both substantially agree; and

an irradiation condition setting unit configured to set conditions of the X-ray

irradiation on the basis of an output signal from the CT value comparing unit and to set a first

irradiation condition under which low-dose X-rays are irradiated and a second irradiation

condition under which high-dose X-rays are irradiated,

wherein the irradiation condition setting unit is further configured to set irradiation

conditions for first scanning under the first irradiation condition, second scanning under the

second irradiation condition, and third scanning under the first irradiation condition during

generation of the second image data.

Claim 25 (New): The X-ray computer tomography apparatus according to any one of

claim 23 or claim 24, wherein the irradiation condition setting unit changes to the irradiation

condition for the second scanning when a CT value in image data obtained by the first

scanning has reached a first threshold value and changes to the irradiation condition for the

third scanning when a CT value in image data obtained by the second scanning has reached a

second threshold value.

Claim 26 (New): An X-ray computer tomography apparatus comprising:

an X-ray source configured to irradiate X-rays onto an object to be examined;

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an X-ray detection unit configured to detect X-rays transmitted through the object;

a driving unit configured to rotate at least one of the X-ray source and the X-ray detection unit around the object;

an image data generation unit configured to generate image data on the basis of projection data using the X-ray detection unit;

an ROI setting unit configured to set up a region of interest (ROI) in first image data from the image data generation unit, prior to injecting a contrast medium into the object;

a CT value calculating unit configured to calculate computer tomography (CT) values in the region of interest being set in second image data from the image data generation unit, on the basis of positional information of the region of interest, the second image data being generated plural times after injecting the contrast medium into the object; and

a CT value display unit configured to display changes of CT values with time calculated by the CT value calculating unit,

wherein the ROI setting unit further configured to attach an identifiable index to the region of interest in at least one of blood vessels at which a contrast medium arrives earliest and latest, respectively.

Claim 27 (New): The X-ray computer tomography apparatus according to claim 26, wherein the CT value display unit configured to display changes of CT values with time in the region of interest at which a contrast medium arrives earliest and latest, in a distinguished manner from the changes of CT values with time in other regions of interest.

Claim 28 (New): An X-ray computer tomography apparatus comprising:

an X-ray source configured to irradiate X-rays into an object to be examined;

an X-ray detection unit configured to detect X-rays transmitted through the object;

a driving unit configured to rotate at least one of the X-ray source and the X-ray detection unit around the object;

an image data generation unit configured to generate image data on the basis of projection data using the X-ray detection unit;

an ROI setting unit configured to set up a region of interest in first image data from the image data generation unit, prior to injecting a contrast medium into the object;

a CT value calculating unit configured to calculate CT values in the region of interest being set in second image data from the image data generation unit, on the basis of positional information of the region of interest, the second image data being generated plural times, after injecting the contrast medium into the object;

a threshold setting unit configured to set at least one threshold value for the CT values;

a CT value comparing unit configured to keep comparing the CT values calculated by the CT value calculating unit with the threshold value set by the threshold setting unit and to generate a coincidence signal when both substantially agree; and

an irradiation condition setting unit configured to set conditions of the X-ray irradiation on the basis of an output signal from the CT value comparing unit,

wherein the ROI setting unit is further configured to attach an identifiable index to the region of interest in at least one of blood vessels at which a contrast medium arrives earliest and latest, respectively.

Claim 29 (New): An X-ray computer tomography apparatus, comprising:

an X-ray source configured to irradiate X-rays into an object to be examined;

an X-ray detection unit configured to detect X-rays transmitted through the object;

a moving unit configured to move the object in a given direction;

an image data generation unit configured to generate image data on the basis of projection data from the object collected from the X-ray detection unit plural times, while moving the object by the moving unit;

an ROI setting unit configured to set at least one region of interest in the image data which is obtained by the image data generation unit;

a CT value calculating unit configured to calculate CT values in the region of interest being set in the image data which is obtained by the image data generation unit, while generating the image data by the image data generation unit;

a threshold setting unit configured to set threshold values for CT values; and

a CT value comparing unit configured to keep comparing CT values obtained by the CT value calculating unit with the threshold values set by the threshold setting unit and to generate an instruction signal for stopping X-ray irradiation when both substantially agree.